

IN THE CLAIMS

Please add claims 10 - 33, as follows.

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10. A high speed color video printer, comprising:
means for providing color video data from a video signal;
data conversion means comprising printing address generating means, recording address
generating means and internal memory,

aid
said data conversion means storing said color video data in the internal memory
at recording addresses generated by said recording address generating means in response to a
recording signal applied to said data conversion means from control means and, said data
conversion means selectively reading said stored color video data of the internal memory in
columns at printing addresses generated in said printing address generating means and
corresponding to pixels of a raster scan of an interlaced video field, said selective reading
provided for printing in response to a printing signal applied to the data conversion means from
said control means; and

line memory means for providing said selectively read color video data for column-by-
column printing by storing said selectively read color video data in columns.

11. The high speed color video printer of claim 10, wherein said printing address
generating means generates said printing addresses for printing of a first of said columns of said
selectively read color video data during a vertical synchronizing and equalizing pulse period of

a blanking interval of a first field period.

12. The high speed color video printer of claim 10, wherein said printing address generating means generates said printing addresses for printing a number n of said columns of said selectively read color video data during a vertical synchronizing and equalizing pulse period of a blanking interval of a number n field period, where n is an integer ranging sequentially from 1 to a number of columns in a frame.

13. The high speed color video printer of claim 10, further comprising means for displaying said stored color video data of the internal memory of the data conversion means in response to a monitoring signal applied to the data conversion means from said control means.

14. The high speed color video printer of claim 13, wherein said data conversion means further comprises monitoring address generating means for providing monitoring addresses of odd rows and monitoring addresses of even rows of said color video data stored in said internal memory by generating said monitoring addresses of said internal memory.

15. The high speed color video printer of claim 14, wherein after said data conversion means has selectively read said color video data for printing, said data conversion means first provides said odd rows of an odd field of a frame of said color video data to the displaying means during a remainder of an odd field period of said odd field and second provides said even rows of an even field of said color video data to the displaying means during a remainder of an

even field period of said even field.

~~16.~~ The high speed color video printer of claim 10, wherein said internal memory comprises:

a first discrete memory for exclusively storing red chrominance components of said color video data at corresponding said recording addresses;

a second discrete memory for exclusively storing green chrominance components of said color video data at corresponding said recording addresses; and

a third discrete memory for exclusively storing blue chrominance components of said color video data at corresponding said recording addresses.

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~~17.~~ A high speed color video printer, comprising:
means for separating a luminance component and a chrominance component of a video signal;

first switching means for providing, in response to a first selection signal from control means, a first switch signal being one of a super video signal and said luminance and chrominance components;

decoding means for providing sync signals and said chrominance components in response to the first switching signal;

second switching means for providing, in response to a second selection signal from the control means, second switching output signals, said second switching output signals being one of said chrominance components and said sync signal from the decoding means, and external

color and sync signals;

analog-to-digital converting means for providing a converted said sync signal of said second switching output signals to the control means, and for providing one of a converted chrominance components and converted external color signals;

data converting means for providing color video data corresponding to said one of converted chrominance components and converted external color signals in response to a mode signal from said control means;

third switching means for selectively applying said color video data to line memory means in response to a third selection signal from the control means; and

an intermediate gradation converting circuit for providing said color video data of the line memory in columns to a thermal print head for printing.

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18. A data converter of a high speed color printer, said data converter comprising:
internal memory for storing color video data, said internal memory comprising a print output port and a display output port;

recording address generating means for providing recording addresses in said internal memory for storing said color video data by generating said recording addresses in response to a recording mode signal of the control means;

printing address generating means for providing printing addresses of said internal memory of said color video data for printing in columns by generating said printing addresses in response to a printing mode signal of the control means;

monitoring address generating means for providing monitoring addresses of odd rows and

monitoring addresses of even rows of said color video data stored in said internal memory by generating said monitoring addresses of said internal memory in response to a monitoring mode signal of the control means; and

address selector means for selecting one of said recording addresses, said printing addresses and said monitoring addresses in response respectively to one of said recording mode signal, said printing mode signal and said monitoring mode signal.

19 19. The data converter of claim 18, wherein after said printing in columns of said color video data:

Cont first, odd rows of an odd field of a frame of said printed color video data is provided to a monitor during a remainder of an odd field period of said odd field; and

second, even rows of an even field of said printed color video data is provided to the monitor during a remainder of an even field period of the even field.

20 20. The data converter of claim 18, wherein said printing address generating means generates said printing addresses for printing of a first of said columns of said color video data during a vertical synchronizing and equalizing pulse period of a blanking interval of a first field period.

Cont 21 21. The data converter of claim 18, wherein said printing address generating means generates said printing addresses for printing a number n of said columns of said color video data during a vertical synchronizing and equalizing pulse period of a blanking interval of a number

n field period, where n is an integer ranging sequentially from 1 to a number of columns in a frame.

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~~22.~~ The data converter of claim 18, wherein said internal memory comprises:

a first discrete memory for exclusively storing red chrominance components of said color video data at corresponding said recording addresses;

a second discrete memory for exclusively storing green chrominance components of said color video data at corresponding said recording addresses; and

a third discrete memory for exclusively storing blue chrominance components of said color video data at corresponding said recording addresses.

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~~23.~~ A high speed printing method of a color video printer, comprising the steps of:

providing color video data from a video signal;

storing said color video data in an internal memory of data conversion means at recording addresses generated by recording address generating means of said data conversion means in response to a recording mode signal;

selectively reading in columns said stored color video data of the internal memory in columns at printing addresses generated in printing address generating means of said data conversion means and corresponding to pixels of a raster scan of an interlaced video field, in response to a printing mode signal;

storing said selectively read color video data in columns in line memory means; and

printing said color video data column-by-column from said line memory means.

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24. The method of claim 23 further comprising the step of said printing address generating means generating said printing addresses for a first of said columns of said selectively read color video data during a vertical synchronizing and equalizing pulse period of a blanking interval of a first field period.

25. The method of claim 23 further comprising the step of said printing address generating means generating said printing addresses for printing a number n of said columns of said selectively read color video data during a vertical synchronizing and equalizing pulse period of a blanking interval of a number n field period, where n is an integer ranging sequentially from 1 to a number of columns in a frame.

26. The method of claim 23 further comprising the step of displaying said stored color video data of the internal memory in response to a monitoring mode signal by generating monitoring addresses of odd rows and monitoring addresses of even rows of said color video data stored in said internal memory in monitoring address generating means of said data conversion means.

27. The method of claim 26 wherein said displaying step occurs after said printing step by first providing said odd rows of an odd field of a frame of said color video data to a display during a remainder of an odd field period of said odd field and second providing said even rows of an even field of said color video data to the display during a remainder of an even field period of said even field.

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~~28.~~ 28. The method of claim 23, wherein said storing step comprises:
storing red chrominance components of said color video data at corresponding said recording addresses in a first discrete memory of said internal memory;
storing green chrominance components of said color video data at corresponding said recording addresses in a second discrete memory of said internal memory; and
storing blue chrominance components of said color video data at corresponding said recording addresses in a third discrete memory of said internal memory.

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~~29.~~ 29. A high speed printing method of a color video printer, comprising the steps of:
providing color video data from a video signal;
storing first chrominance components of said color video data in a first discrete memory;
storing second chrominance components of said color video data in a second discrete memory;
storing third chrominance components of said color video data in a third discrete memory;
selectively reading in columns one of said first, second and third chrominance components from said first, second and third discrete memories, respectively;
storing, in columns in line memory means, said selectively read one of said first, second and third chrominance components; and
printing column-by-column from said line memory means said stored first, second and third chrominance components.

~~30.~~ 30. The method of claim 29 further comprising the step of generating printing addresses

corresponding to said first, second and third discrete memories for a first of said columns of said selectively read one of said first, second and third chrominance components during a vertical synchronizing and equalizing pulse period of a blanking interval of a first field period.

~~31~~ 31. The method of claim 29 further comprising the step of generating printing addresses for printing a number n of said columns of said selectively read one of said first, second and third chrominance components during a vertical synchronizing and equalizing pulse period of a blanking interval of a number n field period, where n is an integer ranging sequentially from 1 to a number of columns in a frame.

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~~32~~ 32. The method of claim 29 further comprising the step of:

generating monitoring addresses of odd rows and monitoring addresses of even rows of said first, second and third chrominance components stored in said first, second and third discrete memories for displaying said first, second and third chrominance components stored in said first, second and third discrete memories

~~33~~ 33. The method of claim 32 wherein said generating step occurs after said printing step by:

first, providing to a display said odd rows of an odd field of a frame of said first, second and third chrominance components stored in said first, second and third discrete memories during a remainder of an odd field period of said odd field; and

second, providing to the display said even rows of an even field of said first, second and

as amended
third chrominance components stored in said first, second and third discrete memories during a remainder of an even field period of said even field.

REMARKS

Claims 1-33 are pending. Claims 10-33 have been added in accordance with current Office policy to alternatively define Applicant's invention and thereby assist the Examiner by facilitating the search and thus expediting the compacted prosecution.

The Abstract and specification have been amended to more clearly disclose the invention by correcting typographical errors, providing proper syntax and semantics. No new subject matter has been added to the specification.

A Letter to the Office Draftsman and Figures 1, 2 and 4-6 with proposed changes marked in red accompany this response. Indication in subsequent Office correspondence of the acceptance to the drawing corrections proposed in the Letter is requested to enable Applicant to timely arrange for the corrections to be made prior to the date for payment of any issue fee. Formal drawings will be filed upon allowance of the application.

A fee of \$582.00 is incurred by the addition of thirteen claims in excess of twenty and by the addition of four independent claims in excess of three. The check of Applicant's attorney payable to the order of the Commissioner of Patents & Trademarks and drawn in this amount, accompanies this paper.

A Certificate of Mailing attesting to the deposit of this Preliminary Amendment on 8 January 1993 with the U.S. Postal Service, as first class mail, in an envelope addressed to the